

CLAIMS

What is claimed is:

1. A device for allocating power comprising:
a power sharing module configured to receive a plurality of signals corresponding to at least one predicted power allocation and at least one current power allocation and to determine from the plurality of signals whether a first service system corresponding to a first wireless service has un-utilized transmission power; and
a scheduler of a second service system corresponding to a second wireless service configured to receive an indication to allocate the un-utilized transmission power from the first wireless service to the second wireless service and utilize the indication to allocate the un-utilized transmission power for the second wireless service.
2. The device, as set forth in claim 1, wherein the first wireless service comprises a CDMA2000 1x service.
3. The device, as set forth in claim 2, wherein the first service system comprises a 1x system.
4. The device, as set forth in claim 1, wherein the second wireless service comprises a CDMA2000 1x evolution data and voice (EVDV) service.

5. The device, as set forth in claim 4, wherein the second service system comprises an EVDV system.

6. The device, as set forth in claim 1, wherein the power sharing module provides the scheduler with the indication to allocate the un-utilized transmission power within a 2 power control group interval.

7. The device, as set forth in claim 1, wherein the indication to allocate the un-utilized transmission power is based on subtracting from an overload setting:

- a current total power utilized by the first service system and the second service system minus the scheduled power in a previous time interval;
- a delta between a current supplemental power and a predicted supplemental power for the first service system; and
- a marginal power that comprises at least one parameter setting.

8. A base station comprising:

- a radio frequency system having a channel card configured to communicate with a plurality of wireless units;
- a first baseband service system that communicates with a first group of the plurality of wireless units via a first plurality of communication channels; and
- a second baseband service system that communicates with a second group of the plurality of wireless units via a second plurality of communication channels, the second baseband service system comprising:
 - a power sharing module configured to receive a plurality of signals corresponding to a plurality of predicted power allocation and a plurality of

current power allocations and to determine from the plurality of signals whether the second baseband service system may allocate power from the first baseband service system; and

a scheduler configured to receive an indication to allocate un-utilized transmission power to the second baseband service system from the first baseband service system and to utilize the indication to allocate un-utilized transmission power for the second plurality of communication channels.

9. The base station, as set forth in claim 8, comprising a power system that determines a radio frequency output power average and an instant radio frequency power, the power system being configured to provide power for transmissions from the first baseband service system to the first group of the plurality of wireless units and from the second baseband service system to the second group of the plurality of wireless units.

10. The base station, as set forth in claim 8, wherein the channel card comprises at least one transceiver configured to communicate with the plurality of wireless units.

11. The base station, as set forth in claim 8, wherein the first baseband service system is a 1x system that provides CDMA2000 1x service to the first group of the plurality of wireless units.

12. The base station, as set forth in claim 8, wherein the second baseband service system is an evolution data and voice (EVDV) system that provides CDMA2000 1xEVDV service to the second group of the plurality of wireless units.

13. A method for allocating transmission power comprising:
providing a first wireless service and a second wireless service for a plurality of wireless units;
obtaining a plurality of input signals corresponding to a plurality of predicted transmission power allocations and a plurality of current transmission power allocations;
determining from the plurality of input signals whether the second wireless service may utilize transmission power from the first wireless service;
and
allocating transmission power to the second wireless service from the first wireless service for at least one communication channel based on an indication of transmission power that is un-utilized by the first wireless service.

14. The method, as set forth in claim 13, wherein providing the first wireless service comprises providing a CDMA2000 1x service to a first portion of the plurality of wireless units.

15. The method, as set forth in claim 14, wherein providing the second wireless service comprises providing a CDMA2000 1x evolution data and voice (EVDV) service to a second portion of the plurality of wireless units.

16. The method, as set forth in claim 15, comprising transmitting the at least one communication channel to at least one of the second portion of the plurality of wireless units.

17. The method, as set forth in claim 13, wherein the plurality of wireless units comprises a plurality of cellular telephones.

18. The method, as set forth in claim 13, wherein the plurality of wireless units comprises at least one portable computer system.

19. A method for allocating power, the method comprising the acts of:
receiving a plurality of input signals corresponding to at least one predicted power allocation for a first wireless service system and at least one current power allocation for the first wireless service system and a second wireless service system;
determining from the plurality of input signals whether non-utilized transmission power from the first wireless service system may be allocated to the second wireless service system; and
providing an indication to allocate non-utilized transmission power from the first wireless service system to the second wireless service system to a scheduler.

20. The method, as set forth in claim 19, comprising the act of allocating the non-utilized transmission power based on the indication to allocate non-utilized

transmission power from the first wireless service system to the second wireless service system for transmissions to a wireless unit.

21. The method, as set forth in claim 19, wherein the at least one communication channel comprises a CDMA2000 1x evolution data and voice (EVDO) communication channel.

22. The method, as set forth in claim 19, wherein the indication to allocate non-utilized transmission power is based on subtracting from an overload setting:

a current total power utilized by the first service system and the second service system minus the scheduled power in a previous time interval;

a delta between a current supplemental power and a predicted supplemental power for the first service system; and

a marginal power that comprises at least one parameter setting.